

pounds and the memory subassembly 14 weighing approximately twenty eight pounds.

[0043] Before turning to the electronic and software specifications of the subassembly 12, it should be noted that the subassembly 14 includes memory 56 which is protected in a "boiler" 58 such as that disclosed in previously incorporated application serial number 09/89

9,646

[0044] According to the presently preferred embodiment, electronic access to the memory 56 is provided by a ribbon cable 60 having a (preferably J10) connector 62. The memory is preferably a stacked memory such as that disclosed in previously incorporated application serial number 09/162,001 or in

U.S. Patent Number 5,969,953, the complete disclosure of which is incorporated by reference herein. More particularly, the memory is preferably of the type utilizing "BGA" packaging (ball grid array packages) as memory components.

[0045] Referring now to Figures 5 and 9-11, the mounting base subassembly 12 includes electronics (partially shown as 64 and 66 in Figures 9 and 10) for receiving data and writing data to the memory in the hardened memory subassembly 14.

[0046] According to the presently preferred embodiment, the power connection is provided by a terminal strip 68 which accepts either 110/220 VAC or 24 VDC or both. The data connection is an ETHERNET connection which is provided by either an RJ-45 connector 70 or an optional ETHERNET terminal block 72. The AC and DC power connections may both be active at the same time. The AC connection is preferably used during normal conditions and the DC connection is

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the formation of a network of multiple HVRs all coupled to numerous sensors via the ETHERNET network.

[0021] The removable hardened memory subassembly preferably includes 1.5 gigabytes of solid state memory which is protected in a "boiler" such as that disclosed in co-owned, co-pending application serial number 09/89 7,646 filed 07/06/2001, the complete disclosure of which is hereby incorporated herein by reference.

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10 Brief Description of the Drawings

[0022] FIG. 1 is a perspective view of an HVR according to the invention;

[0023] FIG. 2 is a side elevation view of an HVR according to the invention;

15 [0024] FIG. 3 is a top view of an HVR according to the invention;

[0025] FIG. 4 is a perspective view of the hardened memory subassembly with the beacon bracket removed;

[0026] FIG. 5 is a perspective view of the mounting
20 base subassembly;

[0027] FIG. 6 is a side elevation view of the hardened memory subassembly with the beacon bracket removed;

[0028] FIG. 7 is a sectional view taken along line
25 A-A in FIG. 6;

[0029] FIG. 8 is a sectional detail of the encircled area of FIG. 2;

[0030] FIG. 9 is a side elevation view of the mounting base subassembly;

30 [0031] FIG. 10 is a sectional view taken along line B-B of FIG. 9;